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Weekly Report
29/05/2019 – 04/06/2019

From last Tuesday, after we visited Xinhuazhiyun, we got the id for access Shuwentool for test a trial. I got an idea when I was looking up the Shuwentool + an idea from Junhua too.

This week I can read just three works for detail not only find an idea.

The idea is from your paper about "Automatic Animation for Time-Varying Data Visualization" [1] again. This paper I've mentioned in the last weekly report (28052019). However, I found the interesting data in it.

First I think the visualizations we have (for example the Brexit project). If we narrate all of them on one page, it will be storytelling of the Brexit news. My first imagine it will look like the news about "who run China" [2].

However, we need the narration of our visualizations like a video. So I think for the next step (inspired by your paper). All visualizations we have narrate like a storyline, it can be transformed into a graph (tree). Your paper let the user travel on the graph. So I think it can be possible that our work can let the user travel on the graph (it means the user also can travel on the visualizations).

However, the question is... if how the user can travel on the graph and then generate the video. When the user moves to the graph, it will look like the user travel base on their need. It is not automatically.

So I read more about the architecture of visual narrative comprehension [3]. This paper quite useful and help me fill the gap about how to construct the story. The article said the narrative structure, it starts from "Arc", and every arc has the "Establisher", "Initial", "Peak", and "Release". However, it is not necessary that each breakdown will have all of the narrative structure element.

The next question is... how the computer know which scene will be "Establisher", "Initial", "Peak", or "Release". This question so easy for people to answer because of the example they use in the paper is the cut scenes of a cartoon. The original is the narrative story.

However, in our work, I think the easiest way to determine the scenes (or the visualizations) should be "Estabisher", "Initial", "Peak", or "Release" is let the user give the flag or number to narrate each visualization. Which one should be the "Establisher", "Initial", "Peak", or "Release" and in every visualization which one is subtypes of the types above. For example, the under of the Establisher it can be "Establisher", "Initial", "Peak", or "Release" again.

For the next step, in the sequencing order of narrative visualizations. In that paper said, there is a test called a constituency test. This test has two types, first is using deletion and second is using movement. Why this step can help us, it can generate the narrate of visualization (that user gave flags already) and let the user select which constituency test that suit for the user.

However, it is a gap here that is how to generate the constituency sequence.

Moreover, that paper also suggests how to narrate the story into a cartoon frame and add the "attentional framing matrix". If it in the video presentation, it will look like the title of Marvel movie that renders the video by the cartoon frame. In this point, I think it will be possible to render the visualizations using two techniques.

For the next reading, I will read more about the "External compositional structure" and the "Assemblage". Moreover, I will read more how the user will determine the flags (based on data visualizations not for the cartoon scenes like the example of this paper).

[1] Yu, L., Lu, A., Ribarsky, W., & Chen, W. (2010). Automatic animation for time-varying data visualization. Computer Graphics Forum, 29(7), 2271–2280. https://doi.org/10.1111/j.1467-8659.2010.01816.x

[2] https://news.cgtn.com/event/2019/whorunschina/index.html

[3] Cohn, N. (2014). The architecture of visual narrative comprehension: The interaction of narrative structure and page layout in understanding comics. Frontiers in Psychology, 5(JUL), 1–9. https://doi.org/10.3389/fpsyg.2014.00680